

IAP2 Rec'd PCT/PTO 23 JUN 2006

PCT/DE2004/002679

P 67861

Patent Claims

1. Metal-containing, hydrogen-storing material that contains a organometallic compound as a catalyst for hydrating or dehydrating the same.
2. Metal-containing material according to claim 1, characterised in that the organometallic compound is liquid.
3. Metal-containing material according to one of claims 1 or 2, characterised in that this displays a nanocrystalline structure.
4. Metal-containing material according to one of the preceding claims, characterised in that the organometallic compound displays a nanocrystalline structure.
5. Metal-containing material according to one of the preceding claims, characterised in that the organometallic compound content lies in the region between 0.005 mol% and 50 mol%.
6. Metal-containing substance according to claim 5, characterised in that the organometallic compound content lies in the region between 0.005 mol% and 20 mol%.
7. Method for the manufacture of a metal-containing material according to one of the preceding claims, characterised in that the metal-containing material with the organometallic compound is subjected to a mechanical grinding process.

8. Method according to claim 7, characterised in that the duration of the grinding process is 1 minute to 200 hours.
9. Method according to claim 8, characterised in that the duration of the grinding process lies in the region from 20 hours to 100 hours.
10. Method according to one of claims 7 to 9, characterised in that the grinding process is performed in an inert gas atmosphere.
11. Method according to claim 10, characterised in that the inert gas is argon.
12. Method according to one of claims 7 to 11, characterised in that the grinding process is performed with the addition of an organic solvent.